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From: Dermer, Michele

Sent: Fri 7/17/2015 8:57:41 PM **Subject:** Aquifer Exemptions in CA.

Greetings from California. Front page of the San Francisco Chronicle this morning.

U.S. likely to bar oil-waste dumping into 10 California aquifers

By David R. Baker

July 16, 2015 Updated: July 16, 2015 7:26pm

Oil companies will probably have to stop injecting their wastewater into 10 Central Valley aquifers that the state has let them use for years, in the latest fallout from a simmering dispute over whether California has adequately protected its groundwater from contamination.

The aquifers lie at the heart of a decades-old bureaucratic snafu whose discovery has upended the state office that regulates oil-field operations and prompted lawmakers to demand reform.

Starting in 1983, California's Division of Oil, Gas and Geothermal Resources let companies dump water left over from their drilling operations into 11 aquifers that the state believed had received federal exemptions from the U.S. Safe Drinking Water Act, which shields groundwater supplies from pollution. But the U.S. Environmental

Protection Agency insisted it had never granted the exemptions. The aquifers, according to the EPA, should have been protected.

After the disagreement came to light, the division agreed to stop oil-company injections into the disputed aquifers or ask the EPA for formal exemptions, which would allow oil companies to continue using the aquifers for disposal. But in an update to the EPA on Wednesday, the division said 10 of the 11 aquifers probably would not meet the legal standards for exemption. They lie too close to the surface -- in one case, as shallow as 200 feet -- and their water isn't salty enough.

One of the 10 aquifers may still be eligible for an exemption, because it may be part of an oil reservoir, said division spokesman Donald Drysdale. The division is still seeking more information.

"We're trying to run that to ground right now," he said.

Five of the aquifers are no longer being used for wastewater disposal, according to the division. If the others don't receive exemptions, wastewater injections there must stop by Dec. 31, 2016.

California's oil fields contain large amounts of salty water mixed with the oil, the remains of an ancient sea. That water must be stripped from the petroleum and disposed of, usually by pumping it back underground. Often, it goes back into the same oil reservoir it came from.

But over time, the division has allowed oil companies to inject billions of barrels of this wastewater into aquifers that had relatively clean water -- water that with treatment could have been used for drinking or irrigation. So far, the state has not found any instances in which the injections contaminated drinking-water supplies. But the division has shut down 23 injection wells that it considered high-risk, due to their close proximity to drinking-water wells.

The division has now established a timetable for phasing out all of the injections into aquifers that should have been protected by the Safe Drinking Water Act, with the last injection wells scheduled to close in February 2017. That long time frame will give the oil companies a chance to find other ways to deal with their "produced water." But it has infuriated environmentalists, who have sued the state to force an immediate shutdown of the injection wells.

The federal EPA can exempt aquifers from the law, but only under stringent conditions. The aquifer must be salty enough or deep enough that tapping it for drinking water isn't practical. If it contains significant amounts of oil or minerals, it's considered a strong candidate for exemption.

If, however, someone already uses it for drinking, it cannot receive an exemption.